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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,165

04/10/2006

Patrick Vion

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CONNOLLY BOVE LODGE & HUTZ LLP

1875 EYE STREET, N.W.

SUITE 1100

WASHINGTON, DC 20006

EXAMINER

KIM, CHRISTOPHER S

ART UNIT

PAPER NUMBER

3752

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,165	<b>Applicant(s)</b> VION, PATRICK	
	<b>Examiner</b> Christopher S. Kim	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The response filed September 15, 2008 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "second pressure reduction stage (2) has sudden widening, the outlet angle of the orifice or orifices of the diaphragm forming it being level ( $180^\circ$ ) or between  $90^\circ$  and  $270^\circ$ " recited in claim 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The amendment filed September 15, 2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Figures 6 and 7 showing appearing to show additional elements to second stage 2.

Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Claim Rejections - 35 USC § 112***

5. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1 recites "the first and second pressure reduction stages are produced in the form of a diaphragm comprising one or more orifices" in lines 5-6. This disclosure teaches

that each of the first and second pressure reduction stages is produced in the form of a diaphragm, but the disclosure fails to teach an embodiment where the first and second pressure reduction stages are produced in the form of a diaphragm.

6. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim 1 recites the limitation "the hydraulic diameter" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the orifice" in line 6. It is uncertain which of the "one or more orifices" it is referencing when there is more than one orifice.

Claim 1 recites the limitation "the equivalent orifice" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "several orifices" in line 7. It appears to be a double inclusion of the "one or more orifices" recited in line 6. Additionally, it is uncertain what quantity constitutes "several."

Claim 1 recites the limitation "the orifice" in line 8. It is uncertain which of the "one or more orifices" it is referencing when there is more than one orifice.

Claim 1 recites the limitation "the equivalent orifice" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "several orifices" in line 9. It appears to be a double inclusion of the "one or more orifices" recited in line 6. Additionally, it is uncertain what quantity constitutes "several."

Claim 1 recites the limitation "the aforementioned orifices" in line 9. The recitation is indefinite where the "one or more orifices" recited in line 6 defines one orifice.

Claim 1 recites the limitation "the available pressure" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "most of the pressure reduction occurs" in line 13. There is insufficient antecedent basis for this limitation in the claim. It is uncertain whether "most" defines a majority or a greatest value.

Claim 1 recites the limitation "saturation pressure" in line 16. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "minimum length" in line 18. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the distance" in line 18. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the end" in line 18. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the second pressure reduction stage side" in line 19. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the point of reattachment" in line 19. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the jets" in line 19. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the walls" in line 20. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the orifice of the first pressure reduction stage" in lines 1-2. The recitation is indefinite where the "one or more orifices" recited in claim 1, line 6 defines one orifice.

Claim 3 recites the limitation "transition chamber" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte*

*Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 3 recites the broad recitation “a height,” and the claim also recites “i.e. a distance separating the first pressure reduction stage from the second stage” which is the narrower statement of the range/limitation.

Claim 3 recites the limitation “the orifice” in line 3. It is uncertain which of the “one or more orifices” recited in claim 1, line 6 it is referencing when there is more than one orifice.

Claim 3 recites the limitation “a height...which is less than the diameter of the orifice of the diaphragm forming the first pressure reduction state that is equal to half this diameter.” It is uncertain what “that is equal to half this diameter” is in reference to. Is claim 8 merely reciting “a height...which is half the diameter of the orifice of the diaphragm forming the first pressure reduction stage?”

Claim 4 recites the limitation “a single central orifice” in line 2. It appears to be a double inclusion of the “one or more orifices” recited in claim 1, line 6.

Claim 5 recites the limitation “a plurality of orifices” in line 2. It appears to be a double inclusion of the “one or more orifices” recited in claim 1, line 6.

Claim 6 recites the limitation “the orifice” in line 2. It is uncertain which of the “one or more orifices” recited in claim 1, line 6 it is referencing when there is more than one orifice.

Claim 6 recites the limitation “several orifices” in line 3. It appears to be a double inclusion of the “one or more orifices” recited in claim 1, line 6. Additionally, it is uncertain what quantity constitutes “several.”



Claim 6 recites the limitation "the orifice" in line 3. It is uncertain which of the "one or more orifices" it is referencing when there is more than one orifice.

Claim 6 recites the limitation "several orifices" in lines 4-5. It appears to be a double inclusion of the "one or more orifices" recited in claim 1, line 6. Additionally, it is uncertain what quantity constitutes "several."

Claim 7 recites the limitation "the outlet angle" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the diaphragm" in line 2. It is uncertain which diaphragm it is referencing.

Claim 7 recites the limitation "being level (180°) or between 90° and 270° in line 3. The claim is indefinite because it fails to define a reference from which the angles are measured.

Claim 8 appears to further limit the outlet pipe by defining an additional element "a trumpet-shaped divergent end." Its parent claim 1 uses the close ended transitional phrase "consists" in defining the outlet pipe. See claim 1, line 17.

The claims are replete with indefiniteness under 35 U.S.C. 112, second paragraph. The examiner has, in good faith, attempted to provide a comprehensive listing. Applicant is required to amend all of the claims in their entirety to ensure full compliance with 35 U.S.C. 112, second paragraph.

***Claim Rejections - 35 USC § 102***

7. Claims 1, 2, 4 (as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Piggott (3,784,111).

Piggott discloses a pressurized water pressure-reducing nozzle comprising:

- a first pressure reduction stage 26;
- an intermediate transfer chamber 23;
- a second pressure reduction stage 25;
- an outlet pipe 17, 19-21;

The functional recitations merely requires the ability to perform and does not constitute positively recited limitations. Depending on the operating parameters, there is nothing prohibiting Piggott's device from performing the function recitations.

### ***Response to Arguments***

8. Applicant's arguments filed September 15, 2008 have been fully considered but they are not persuasive.

Applicant argues that Piggott fails to disclose

the outlet pipe consists of a sudden pressure reduction and cavitation confinement pipe, whose minimum length substantially corresponds to the distance separating the end of said pipe on the second pressure reduction stage side from the point of reattachment of the jets onto the walls of the pipe, with an angle of divergence of the jets, before reattachment, between 3° and 12°.

The claim appears to define a "minimum length" in terms of function, i.e., the point of reattachment of the jets onto the walls of the pipe. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be

distinguished from the prior art in terms of structure rather than function. MPEP 2114. It would appear that the "point of reattachment" is dependent on the functioning parameter, e.g., pressure, flow rate, etc.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher S. Kim/  
Primary Examiner, Art Unit 3752

CK